Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT

Permittee Name:	**Westvaco Corporation**
Mailing Address:	**2025 Beech Grove Road** **Wickliffe, Kentucky 42087**
Source Name:	**Westvaco Corporation, Chemical Division, Carbon Department**
Mailing Address:	**2025 Beech Grove Road** **Wickliffe, Kentucky 42087**
Source Location:	**Same as above**
Permit Type:	**Federally-Enforceable**
Review Type:	**NSR, PSD, Title V**
Permit Number:	**V-99-009**
Log Number:	**F728**
Application Complete Date:	**September 7, 1998**
KYEIS ID #:	**072-0100-0012**
AFS Plant ID #:	**21-007-00012**
SIC Code:	**2819**
Region:	**Paducah**
County:	**Ballard**
Issuance Date:	**March 10, 1999**
Expiration Date:	**March 10, 2004**

John E. Hornback, Director
Division for Air Quality

TABLE OF CONTENTS

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application which was determined to be complete on September 7, 1998, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in the Regulation 401 KAR 50:035, Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

INDEX OF EMISSION POINTS LISTED IN SECTION B

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

01 (EP010) Woodbase Carbon Sawdust Delivery/Handling

Emission Sources: The following operations are sources of fugitive dust emissions:
Delivery truck traffic
Delivery truck dump
Reclaim by front end loader
Reclaim hopper
Sawdust screening
Reject sawdust truck loading
Transfer to sawdust feed tank
Sawdust storage pile wind erosion

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the PM_{10} emissions.
b. Regulation 401 KAR 63:010 applies to the fugitive dust emissions.

1. Operating (BACT) Limitations:

All reasonable measures shall be taken to prevent particulate matter from becoming airborne at all times. These measures shall include, but not be limited to the following:

a. Sawdust handling and delivery: Use of enclosures and/or wet suppression.
b. Plant roadways: Use of wet suppression, surface treatment, sweeping, speed control and/or paving.

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the amount of sawdust delivered to the source premises each calendar month (tons/month).

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (EP020) Woodbase Carbon Acid/Mixing, Activation Kiln, and Acid Recovery System (vented through common Stack A):

Emissions Sources:
a. Natural gas fired No.12 Activation Kiln (70 mmBTU/hr) - activation process and kiln natural gas combustion emissions
b. Natural gas fired Afterburner (130 mmBTU/hr) - natural gas combustion emissions

Control Devices:
a. Afterburner (VOC, CO)
b. Wet Fan, Reverse Jet Scrubber, and Brink Mist Eliminator in series (PM_{10}, H_3PO_4)

Other Devices:
a. Activation Kiln - Low NOx burner (NOx)
b. Afterburner - Low NOx burner (NOx)

APPLICABLE REGULATIONS:
a. Regulation 401 KAR 51:017 applies to carbon monoxide, nitrogen oxides, volatile organic compounds (VOC), and PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

STATE-ORIGIN APPLICABLE REGULATIONS:
c. Regulation 401 KAR 63:022 applies to the furfural and phosphoric acid emissions.

1. Operating Limitations:
a. The sawdust feedrate to the activation kiln shall not exceed 30,000 lb/hr (corrected to 42% moisture by weight) or 17,400 lb/hr (dry weight basis) averaged over any 3-hour period.
b. The afterburner shall control emissions of volatile organic compounds and carbon monoxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the activation kiln is in operation. The activation kiln is considered in operation any time sawdust is being conveyed to the activation kiln.
c. The wet fan, reverse jet scrubber, and Brink mist eliminator shall control emissions of PM_{10} and H_3PO_4 and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the activation kiln is in operation.

Compliance Demonstration Method:
a. The permittee shall monitor the sawdust feed rate to the activation kiln for every hour of operation. The feed rate shall be recorded as a rolling 3-hour average.
b. The permittee shall monitor the moisture content of the sawdust every 4 hours.
c. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the activation kiln is in operation but the afterburner, wet fan, reverse jet scrubber, or Brink mist eliminator are not.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (EP020) Woodbase Carbon Acid/Mixing, Activation Kiln, and Acid Recovery System (continued)

2. Emission Limitations:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3):
   i. Emissions of carbon monoxide shall not exceed 82.74 lb/hr.
   ii. Emissions of nitrogen oxides shall not exceed 41.60 lb/hr.
   iii. Emissions of particulate emissions (including PM_{10}) shall not exceed 14.60 lb/hr.
   iv. Emissions of volatile organic compounds (VOC) shall not exceed 122.69 lb/hr.
   v. Emissions of NOx from the activation kiln and afterburner natural gas burners shall not exceed 0.130 lb/mmBTU and 0.3 lb/mmBTU, respectively.
   vi. The above limits are based on a 30-day average.

b. Air Toxic (State-Origin) Limit - Pursuant to Regulation 401 KAR 63:022, Section 3 (1):
   i. Emissions of phosphoric acid shall not exceed 13.80 lb/hr.
   ii. Emissions of furfural shall not exceed 32.90 lb/hr.
   iii. The emission limits for phosphoric acid and furfural are state only requirements and are based on an eight-hour average.

c. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack A shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission Limit:
   i. For furfural/H_3PO_4/CO/VOC/PM_{10}:
   Actual Emission Rate = [Monthly dry sawdust feed to the activation kiln] x [Emission factor observed during last state witnessed stack test (in pounds furfural/H_3PO_4/CO/VOC/PM_{10} per ton of dry sawdust feed)] ÷ [Monthly hours of operation]
   ii. For NOx:
   Actual Emission Rate = [Monthly natural gas to the activation kiln] x [Emission Factor observed during last state witnessed stack test (in pounds NOx per thousand cubic feet natural gas) ÷ [Monthly hours of operation]
   iii. Compliance with the low NOx burner limits (lb/mmBTU) shall be determined by stack testing as described in General Condition **D**.1. For the purposes of this permit, the permittee has fulfilled the requirement for NOx testing through testing conducted on January 27, 1998. Compliance with the NOx burner limits will be demonstrated by the protocol described in General Condition **D**.1.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (EP020) Woodbase Carbon Acid/Mixing, Activation Kiln, and Acid Recovery System (continued)

Compliance Demonstration Method: (continued)

b. Opacity Limit:
   i. During periods of normal operation of the wet fan, reverse jet scrubber, and Brink mist eliminator, no compliance demonstration is necessary.
   ii. If the activation kiln is in operation during any period of malfunction of the wet fan, reverse jet scrubber, or Brink mist eliminator, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements:

a. Except as noted below, pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. The analytical method used to measure phosphoric acid and PM10 shall be the method submitted by Westvaco to the KDAQ for the compliance test conducted June 9, 1998.
c. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Hourly sawdust feed rate.
b. Sawdust moisture content.
c. Monthly hours of operation (i.e., time during which sawdust conveyed to activation kiln).
d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, monitoring devices for the continuous measurement of:
   i. The temperature at the outlet of the afterburner.
   ii. The liquid flow rate to the wet fan.
   iii. The differential static pressure across the reverse jet scrubber.
   iv. The differential static pressure across the Brink mist eliminator.

5. Specific Recordkeeping Requirements:

The permittee shall keep records of the following information:

a. Hourly (3-hour average) sawdust feed rate.
b. Sawdust moisture content.
c. Monthly hours of operation of the activation kiln.
d. Continuous records of the following information:
   i. The temperature at the outlet of the afterburner.
   ii. The liquid flow to the wet fan.
   iii. The differential static pressure across the reverse jet scrubber.
   iv. The differential static pressure across the Brink mist eliminator.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (EP020) Woodbase Carbon Acid/Mixing, Activation Kiln, and Acid Recovery System (continued)

5. Specific Recordkeeping Requirements: (continued)

e. During all periods of malfunction of either the wet fan, reverse jet scrubber, and/or Brink mist eliminator, if the activation kiln is in operation, a daily (calendar day) log of the following information shall be kept:
   i. Whether any air emissions were visible from Stack A;
   ii. Whether the visible emissions were normal for the stack.

   If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:
   iii. The permittee shall perform a Method 9 reading for Stack A. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
   iii. The permittee shall observe and record in the daily log the following additional information regarding Stack A:
      (1) The color of the emissions;
      (2) Whether the emissions were light or heavy;
      (3) The total duration of the visible emission incident;
      (4) The cause of the abnormal emissions; and
      (5) Any corrective actions taken.

f. All maintenance activities performed at the afterburner, wet fan, reverse jet scrubber, and Brink mist eliminator.

6. Specific Reporting Requirements:

See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:

For the afterburner:

a. The afterburner shall operate at a minimum temperature of 1600°F (3-hour average).
b. An **excursion** from the operating range specified above is any 3-hour period during which the average temperature in the afterburner was below the minimum specified.

For the wet fan:

a. The wet fan shall be operated at a minimum flow rate of 35 gpm of liquid to the fan (3-hour average).
b. An **excursion** from the operating range specified above is any 3-hour period during which the average flow rate of liquid to the fan was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (EP020) Woodbase Carbon Acid/Mixing, Activation Kiln, and Acid Recovery System (continued)

7. Specific Control Equipment Operating Conditions: (continued)

For the reverse jet scrubber:

a. The reverse jet scrubber shall be operated at a minimum differential pressure drop of 30 inches of water (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the reverse jet scrubber was below the minimum specified.

For the Brink mist eliminator:

a. The Brink mist eliminator shall be operated at a maximum differential pressure drop of 12 inches of water (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the Brink demister was above the maximum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (EP030) Woodbase Drying/Screening/Grinding/Packaging:
(Vented to common Stack B):

Emission Sources:
a. Natural gas fired No.11 Drying Kiln (40 mmBTU/hr):
Process and combustion emissions
b. Screening, grinding, and packaging operations:
Process emissions

Control Devices:
a. Drying kiln - Baghouse (PM_{10}), Low NOx burners (NOx)
b. Screening, grinding, and packaging operations - Cartridge Filter (PM_{10})

APPLICABLE REGULATIONS:
a. Regulation 401 KAR 51:017 applies to the carbon monoxide, nitrogen oxides, volatile organic compounds (VOC) and PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations:
a. The baghouse on the drying kiln shall control emissions of PM_{10} and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the drying kiln is in operation. The drying kiln is considered in operation any time carbon is being conveyed to the drying kiln.
b. The cartridge filter shall control emissions of PM_{10} and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the screening, grinding, and packaging processes are in operation. The screening, grinding, and packaging processes are considered in operation any time carbon is being conveyed to or from these processes.

Compliance Demonstration Method:
a. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the drying kiln is in operation but the baghouse is not.
b. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the screening, grinding, and packaging processes are in operation but the cartridge filter is not.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (EP030) Woodbase Drying/Screening/Grinding/Packaging: (continued)

2. Emission Limitations:

For the *drying kiln* -

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3):
   i. Carbon monoxide emissions shall not exceed 5.64 lb/hr.
   ii. Nitrogen oxides emissions shall not exceed 4.0 lb/hr and 0.10 lb/mmBTU.
   iii. Particulate emissions (including PM_{10}) shall not exceed 5.25 lb/hr.
   iv. Volatile organic compound emissions shall not exceed 0.11 lb/hr.
   v. The above limits are based on a 30-day average.
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack B shall not equal or exceed 20 percent.

For the *screening/grinding/packaging operations*:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3), emissions of particulate matter (including PM_{10}) shall not exceed 1.5 lb/hr (30-day average).
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack B shall not equal or exceed 20 percent.

Compliance Demonstration Method:

For the *drying kiln* -

a. Mass Emission Limit:
   i. For CO:
   Actual Emission Rate = [Monthly dry sawdust to activation kiln] x [Emission factor observed during last state witnessed stack test (in pounds CO/per ton dry sawdust)] ÷ [Monthly hours of operation of drying kiln]

   ii. For drying kiln NOx and VOC:
   Actual Emission Rate = [Monthly natural gas to drying kiln] x [Emission factor observed during last state witnessed stack test (in pounds NO_x/VOC per thousand cubic feet natural gas)] ÷ [Monthly hours of operation of drying kiln]

   iii. Compliance with the low NOx burner limits (lb/mmBTU) shall be determined by stack testing as described in General Condition **D**.1. For the purposes of this permit, the permittee has fulfilled the requirement for NOx testing through testing conducted on May 12, 1998.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (EP030) Woodbase Drying/Screening/Grinding/Packaging: (continued)

Compliance Demonstration Method: (continued)

b. Opacity Limit:
   i. During periods of normal operation of the baghouse, no compliance demonstration is necessary.
   ii. If the drying kiln is in operation during any period of malfunction of the baghouse, the permittee shall determine compliance through maintenance of the records required by Item f. under **5. Specific Recordkeeping Requirements below**.

For the *screening/grinding/packaging operations*:

a. Mass Emission Limit:
   Actual Emission Rate = [Monthly dry sawdust to activation kiln] x [Emission factor observed during last state witnessed stack test (in pounds PM_{10}/per ton dry sawdust)] ÷ [Monthly hours of operation of drying kiln]

b. Opacity Limit:
   i. During periods of normal operation of the cartridge filter, no compliance demonstration is necessary.
   ii. If the screening/grinding/packaging system is in operation during any period of malfunction of the cartridge filter, the permittee shall determine compliance through maintenance of the records required by Item f. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly dry sawdust feed to activation kiln.
b. Monthly natural gas to drying kiln.
c. Monthly hours of operation of the drying kiln.
d. Monthly hours of operation of the screening/grinding/packaging operations.
e. The permittee shall maintain, calibrate and operate according to manufacturer's specification, monitoring devices for the continuous measurement of:
   i. The differential static pressure across the drying kiln baghouse.
   ii. The differential static pressure across the cartridge filter on the screening / grinding / packaging operations.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (EP030) Woodbase Drying/Screening/Grinding/Packaging: (continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly dry sawdust feed to activation kiln.
b. Monthly natural gas to drying kiln.
c. Monthly hours of operation of the drying kiln.
d. Monthly hours of operation of the screening/grinding/packaging operations.
e. Continuous records of the following information:
   i. The differential static pressure across the drying kiln baghouse.
   ii. The differential static pressure across the cartridge filter on the screening / grinding / packaging operations.
f. During all periods of malfunction of the baghouse, if the drying kiln is in operation; **or** during periods of malfunction of the cartridge filter, if the screening/grinding/packaging processes are in operation, a daily (calendar day) log of the following information shall be kept:
   i. Whether any air emissions were visible from Stack B;
   ii. Whether the visible emissions were normal for the stack.

   If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:
   iii. The permittee shall perform a Method 9 reading for Stack B. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
   iii. The permittee shall observe and record in the daily log the following additional information regarding Stack B:
      (1) The color of the emissions;
      (2) Whether the emissions were light or heavy;
      (3) The total duration of the visible emission incident;
      (4) The cause of the abnormal emissions; and
      (5) Any corrective actions taken.
g. All maintenance activities performed at the baghouse and cartridge filter.

6. Specific Reporting Requirements:

See General Condition **F**.5.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (EP030) Woodbase Drying/Screening/Grinding/Packaging (Continued):

7. Specific Control Equipment Operating Conditions:

For the drying kiln baghouse:

a. The baghouse shall be operated at a minimum differential pressure drop of 1 inch of water (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the baghouse was below the minimum specified.

For the cartridge filter on the screening/grinding/packaging processes:

a. The cartridge filter shall be operated at a minimum differential pressure drop of 1 inch of water (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the cartridge filter was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

04 (EP040) Woodbase Bulk Storage Tanks and Rail Shipment
(Vented to Stack C)

Emission Sources:
Three (3) bulk storage tanks and rail shipment process operations

Control Devices:
Bulk storage tanks and rail shipment operations - Cartridge filter (PM_{10})

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations:

The cartridge filter shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions sources [bulk storage tanks and rail shipment process operations] listed above are in operation. The bulk storage tanks and rail shipment process operations are considered in operation any time powdered carbon is being conveyed to or from the bulk storage tanks.

Compliance Demonstration Method:

The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the emission sources listed above are in operation but the associated cartridge filter is not.

2. Emission Limitations:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3), emissions of particulate matter (PM_{10}) shall not exceed 0.50 lbs/hr (30-day average).
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack C shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission Limit:
Actual Emission Rate = [Monthly powdered carbon production] x [Emission factor observed during last state witnessed stack test (in pounds PM_{10} per ton of powdered carbon production)] ÷ [Monthly hours of operation]

b. Opacity Limit:
   i. During periods of normal operation of the cartridge filter, no compliance demonstration is necessary.
   ii. If the bulk storage tanks and rail shipment processes are in operation during any period of malfunction of the cartridge filter, the permittee shall determine compliance through maintenance of the records required by Item d. under **5. Specific Recordkeeping Requirements below**.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

04 (EP040) Woodbase Bulk Storage Tanks and Rail Shipment (Continued)

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly amount of powdered carbon production (in tons/month or equivalent).

b. Monthly hours of operation of the grinding process (i.e., roller mill).

c. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the differential static pressure across the cartridge filter.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly amount of powdered carbon production (in tons/month or equivalent).

b. Monthly hours of operation of the grinding process (i.e., roller mill).

c. Continuous records of the differential static pressure across the cartridge filter (on strip chart recorder, electronic data acquisition system or equivalent).

d. During all periods of malfunction of the cartridge filter, if the bulk storage tanks and rail shipment processes are in operation, a daily (calendar day) log of the following information shall be kept:

   i. Whether any air emissions were visible from Stack C;

   ii. Whether the visible emissions were normal for the stack.

   If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:

   iii. The permittee shall perform a Method 9 reading for Stack C. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or

   iii. The permittee shall observe and record in the daily log the following additional information regarding Stack C:

      (1) The color of the emissions;

      (2) Whether the emissions were light or heavy;

      (3) The total duration of the visible emission incident;

      (4) The cause of the abnormal emissions; and

      (5) Any corrective actions taken.

e. All maintenance activities performed at the cartridge filter.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

04 (EP040) Woodbase Bulk Storage Tanks and Rail Shipment (Continued)

6. Specific Reporting Requirements:
See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:
For the cartridge filter:

a. The cartridge filter shall be operated at a minimum differential pressure drop of 1 inch of water (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average minimum pressure drop across the cartridge filter was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (EP070) Catalyst Plant Preheaters and Reactors (vented through common Stack A):

Emissions Sources:
a. Two (2) Preheaters (P1, P2) - process emissions
b. Four (4) Reactors (R1, R2, R3, R4) - process emissions
c. Natural gas fired Afterburner (6 mmBTU/hr) - natural gas combustion emissions

Control Devices:
a. Venturi Absorber Scrubber (PM_{10}, H_3PO_4) - preheater P1 only
b. Venturi Absorber Scrubber (PM_{10}, H_3PO_4) - preheater P2 only
c. Afterburner (VOC, CO) - preheaters and reactors
d. Rotoclone Scrubber (PM_{10}, H_3PO_4) - preheaters and reactors
e. Reverse Jet Scrubber (PM_{10}, H_3PO_4) - preheaters and reactors

Other Devices:
Afterburner - Low NOx burner (NOx)

APPLICABLE REGULATIONS:
a. Regulation 401 KAR 51:017 applies to carbon monoxide, nitrogen oxides, volatile organic compounds (VOC), and PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

STATE-ORIGIN APPLICABLE REGULATIONS:
c. Regulation 401 KAR 63:022 applies to the phosphoric acid emissions.

1. Operating Limitations:
a. The venturi absorber scrubbers shall control emissions of PM_{10} and H_3PO_4 and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the catalyst preheaters are in operation. A catalyst preheater (P1 or P2) is considered in operation any time carbon is being conveyed to or from the preheater.
b. The afterburner shall control emissions of volatile organic compounds and carbon monoxide and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the preheaters and reactors are in operation. The preheaters and reactors are considered in operation any time carbon is being fed to the preheaters or reactors.
c. The rotoclone and reverse jet scrubbers shall control emissions of PM_{10} and H_3PO_4 and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the preheaters and reactors are in operation.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (EP070) Catalyst Plant Preheaters and Reactors: (continued)

1. Operating Limitations:

Compliance Demonstration Method:

a. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when a catalyst preheater is in operation but the associated venturi absorber scrubber is not.

b. The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the catalyst preheaters or reactors are in operation but the afterburner, rotoclone scrubber or reverse jet scrubber are not.

2. Emission Limitations:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3):

i. Emissions of carbon monoxide shall not exceed 19.29 lb/hr.
ii. Emissions of nitrogen oxides shall not exceed 6.60 lb/hr.
iii. Emissions of particulate emissions (including PM_{10}) shall not exceed 2.19 lb/hr.
iv. Emissions of volatile organic compounds (VOC) shall not exceed 3.97 lb/hr.
v. Emissions of NOx from the afterburner shall not exceed 0.10 lb/mmBTU.
vi. The above limits are based on a 30-day average.

b. Air Toxic (State-Origin) Limit - Pursuant to Regulation 401 KAR 63:022, Section 3 (1): Emissions of phosphoric acid shall not exceed 2.07 lb/hr (8-hour average). The phosphoric acid emission limit is a state requirement only.

c. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack A shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission Limit:

i. For CO, NOx, and VOC:

Actual Emission Rate = [Monthly carbon feed to preheaters] x [Emission factor observed during last state witnessed stack test (in pounds CO/NOx/VOC per ton of carbon feed)] ÷ [Monthly hours of operation of Catalyst Plant Preheaters]

ii. For H_3PO_4 and PM_{10}:

Actual Emission Rate = [Monthly carbon feed to preheaters] x [Emission factor observed during last state witnessed stack test (in pounds H_3PO_4/PM_{10} per ton of carbon feed)] ÷ [Monthly hours of operation of Catalyst Plant Preheaters]

ii. Compliance with the low NOx burner limits (lb/mmBTU) shall be determined by vendor supplied specifications.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (EP070) Catalyst Plant Preheaters and Reactors: (continued)

Compliance Demonstration Method: (continued)

b. Opacity Limit:
   i. During periods of normal operation of the venturi absorber scrubbers, rotoclone scrubber, and reverse jet scrubber, no compliance demonstration is necessary.
   ii. If the preheaters or reactors are in operation during any period of malfunction of the venturi absorber scrubbers, rotoclone scrubber, or reverse jet scrubber, the permittee shall determine compliance through maintenance of the records required by Item d. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly carbon feed rate to the preheaters.
b. Monthly hours of operation of the catalyst preheaters.
c. The permittee shall maintain, calibrate and operate according to manufacturer's specification, monitoring devices for the continuous measurement of:
   i. The differential static pressure across each venturi absorber scrubber.
   ii. The temperature of the combustion chamber in the afterburner.
   iii. The liquid flow rate to the rotoclone scrubber.
   iv. The differential static pressure across the reverse jet scrubber.

5. Specific Recordkeeping Requirements:

The permittee shall keep records of the following information:

a. Monthly carbon feed rate to the preheaters.
b. Monthly hours of operation of the catalyst preheaters.
c. Continuous records of the following information:
   i. The differential static pressure across each venturi absorber scrubber.
   ii. The temperature of the combustion chamber in the afterburner.
   iii. The liquid flow rate to the rotoclone scrubber.
   iv. The differential static pressure across the reverse jet scrubber.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (EP070) Catalyst Plant Preheaters and Reactors: (continued)

5. Specific Recordkeeping Requirements: (continued)

d. During all periods of malfunction of either the venturi absorber scrubbers, rotoclone scrubber, or reverse jet scrubber, if the preheaters or reactors are in operation, a daily (calendar day) log of the following information shall be kept:
   i. Whether any air emissions were visible from Stack A;
   ii. Whether the visible emissions were normal for the stack.

   If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:
   iii. The permittee shall perform a Method 9 reading for Stack A. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
   iii. The permittee shall observe and record in the daily log the following additional information regarding Stack A:
      (1) The color of the emissions;
      (2) Whether the emissions were light or heavy;
      (3) The total duration of the visible emission incident;
      (4) The cause of the abnormal emissions; and
      (5) Any corrective actions taken.

e. All maintenance activities performed at the venturi scrubber, packed bed scrubber, afterburner, rotoclone scrubber, and reverse jet scrubber.

6. Specific Reporting Requirements:

See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:

For the venturi absorber scrubbers:

a. Each venturi absorber scrubber shall be operated at a minimum differential pressure drop of 30 inches of water (3-hour average).
b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across a venturi absorber scrubber was below the minimum specified.

For the afterburner:

a. The afterburner shall operate at a minimum temperature of 1600°F (3-hour average).
b. An **excursion** from the operating range specified above is any 3-hour period during which the average temperature in the afterburner was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (EP070) Catalyst Plant Preheaters and Reactors: (continued)

7. Specific Control Equipment Operating Conditions: (continued)

For the rotoclone scrubber:

a. The rotoclone scrubber shall be operated at a minimum liquid flow rate of 8.5 gpm (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average liquid flow rate to the rotoclone scrubber was below the minimum specified.

For the reverse jet scrubber:

a. The reverse jet scrubber shall be operated at a minimum differential pressure drop of 22 inches of water (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the reverse jet scrubber was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

08 (EP080) Catalyst Plant Storage and Feed System, Product Finishing, Storage and Shipping (Vented through common Stack A)

Emission Sources:
Catalyst plant storage process operations
Catalyst plant feed system process operations
Catalyst plant finishing process operations
Catalyst plant storage process operations
Catalyst plant shipment process operations

Control Devices:
Catalyst plant storage - Cartridge filter (PM_{10})
Catalyst plant feed system -Cartridge filter (PM_{10})
Catalyst plant finishing, storage, and shipment - Common cartridge filter (PM_{10})

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations:

The cartridge filters shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions sources [catalyst plant storage, feed system, product finishing, storage and shipment process operations] listed above are in operation. The catalyst plant feed storage system is considered in operation any time carbon is being conveyed to the feed storage system. The feed system is considered in operation any time carbon is being conveyed to or from feed system. The product finishing, storage and shipment process operations are considered in operation any time carbon is being conveyed to or from the product finishing, storage and shipment process operations.

Compliance Demonstration Method:

The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the emission sources listed above are in operation but the associated cartridge filters are not.

2. Emission Limitations:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3), emissions of particulate matter (PM_{10}) shall not exceed 1.50 lbs/hr (30-day average).
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack A shall not equal or exceed 20 percent.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

08 (EP080) Catalyst Plant Storage and Feed System, Product Finishing, Storage and Shipping (continued)

2. Emission Limitations: (continued)

Compliance Demonstration Method:

a. Mass Emission Limit:

Actual Emission Rate = [Monthly carbon feed to preheaters] x [Emission factor observed during last state witnessed stack test (in pounds PM_{10} per ton of carbon feed)] ÷ [Monthly hours of operation of Catalyst Plant Preheaters]

b. Opacity Limit:

i. During periods of normal operation of the cartridge filters, no compliance demonstration is necessary.

ii. If the catalyst plant storage, feed system, product finishing, storage and shipment processes are in operation during any period of malfunction of the associated cartridge filters, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly amount of carbon conveyed to preheaters (in tons/month or equivalent).

b. Monthly hours of operation of each process.

c. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a Triboguard detector (or equivalent) to monitor the performance of the three cartridge filters listed above. The detector shall be capable of detecting a malfunction or increased particulate matter flow through one of the filters.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly amount of carbon conveyed to the preheaters (in tons/month or equivalent).

b. Monthly hours of operation of each process.

c. Records of the set-point at which the Triboguard detector will activate an alarm indicating a malfunction in the cartridge filters or increased particulate matter flow through the filters. This setpoint shall be correlated to the maximum emission limit for particulate matter (PM_{10}) for this emission point (1.50 lbs/hr).

d. All maintenance activities performed at each cartridge filter.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

08 (EP080) Catalyst Plant Storage and Feed System, Product Finishing, Storage and Shipping (continued)

5. Specific Recordkeeping Requirements: (continued)

e. During any periods of malfunction of the cartridge filters, if the catalyst plant storage, feed system, product finishing, storage and shipment processes are in operation, a daily (calendar day) log of the following information shall be kept:

i. Whether any air emissions were visible from Stack A;

ii. Whether the visible emissions were normal for the stack.

If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:

iii. The permittee shall perform a Method 9 reading for Stack A. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or

iii. The permittee shall observe and record in the daily log the following additional information regarding Stack A:

(1) The color of the emissions;

(2) Whether the emissions were light or heavy;

(3) The total duration of the visible emission incident;

(4) The cause of the abnormal emissions; and

(5) Any corrective actions taken.

6. Specific Reporting Requirements:

See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:

The permittee shall operate a Triboguard detector (or equivalent) whenever one or more of the cartridge filters listed above is in operation.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

10 (EP100) Extrusion Plant Storage, Feed, Mixing, Extrusion System
(Vented through common Stack B)

Emission Sources:
Extrusion Plant Storage, Feed, Mixing, Extrusion process operations

Control Devices:
Extrusion Plant Storage, Feed, Mixing, Extrusion System - Cartridge filter (PM_{10})

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations:

The cartridge filter shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions sources [extrusion plant storage, feed, mixing, extrusion process operations] listed above are in operation. The extrusion plant storage, feed, mixing, extrusion process operations are considered in operation any time carbon is being conveyed to or from the extrusion plant storage, feed, mixing, extrusion process operations.

Compliance Demonstration Method:

The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the emission sources listed above are in operation but the associated cartridge filter is not.

2. Emission Limitations:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3), emissions of particulate matter (PM_{10}) shall not exceed 0.94 lbs/hr (30-day average).
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack B shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission Limit:
Actual Emission Rate = [Monthly extruded carbon produced] x [Emission factor observed during last state witnessed stack test (in pounds PM_{10} per ton of extruded carbon produced)] ÷ [Monthly hours of operation]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

10 (EP100) Extrusion Plant Storage, Feed, Mixing, Extrusion System (Continued)

Compliance Demonstration Method:

b. Opacity Limit:
   i. During periods of normal operation of the cartridge filter, no compliance demonstration is necessary.
   ii. If the extrusion plant storage, feed, mixing, extrusion processes are in operation during any period of malfunction of the cartridge filter, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. See General Condition **G**. (d) 5.
c. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly amount of extruded carbon produced (in tons/month or equivalent).
b. Monthly hours of operation of the extrusion plant storage, feed, mixing, extrusion processes.
c. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the differential static pressure across the cartridge filter.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly amount of extruded carbon produced (in tons/month or equivalent).
b. Monthly hours of operation.
c. Continuous records of the differential static pressure across the cartridge filter (on strip chart recorder, electronic data acquisition system or equivalent).
d. During all periods of malfunction of the cartridge filter, if the extrusion plant storage, feed, mixing, extrusion processes are in operation, a daily (calendar day) log of the following information shall be kept:
   i. Whether any air emissions were visible from Stack B;
   ii. Whether the visible emissions were normal for the stack.

   If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

10 (EP100) Extrusion Plant Storage, Feed, Mixing, Extrusion System (Continued)

5. Specific Recordkeeping Requirements: (continued)

d. iii. The permittee shall perform a Method 9 reading for Stack B. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or

iii. The permittee shall observe and record in the daily log the following additional information regarding Stack B:

(1) The color of the emissions;
(2) Whether the emissions were light or heavy;
(3) The total duration of the visible emission incident;
(4) The cause of the abnormal emissions; and
(5) Any corrective actions taken.

e. All maintenance activities performed at the cartridge filter.

6. Specific Reporting Requirements:

See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:

For the cartridge filter:

a. The cartridge filter shall be operated at a minimum differential pressure drop to be determined on startup (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the cartridge filter was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

11 (EP110) Extrusion Plant Vibrating Fluidized Bed Dryer
(Vented through common Stack B)

Emission Sources:
Natural gas fired vibrating fluidized bed dryer (2 mmBTU/hr) - process and natural gas combustion emissions

Control Devices:
Vibrating fluidized bed dryer - Rotoclone scrubber (PM_{10})

Other Devices:
Vibrating fluidized bed dryer - Low NOx burner (NOx)

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the carbon monoxide, nitrogen oxides, volatile organic compounds (VOC), and PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations:

The rotoclone scrubber shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the extrusion plant dryer is in operation. The extrusion plant dryer is considered in operation any time carbon is being conveyed to the dryer.

Compliance Demonstration Method:

The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the extrusion plant dryer is in operation but the associated rotoclone scrubber is not.

2. Emission Limitations:

a. Mass Emission (BACT) Limits - Pursuant to Regulation 401 KAR 51:017, Section 9 (3):
   i. Emissions of carbon monoxide shall not exceed 0.05 lbs/hr.
   ii. Emissions of nitrogen oxides shall not exceed 0.1 lb/mmBTU and 0.20 lbs/hr.
   iii. Emissions of particulate matter (PM_{10}) shall not exceed 1.27 lbs/hr.
   iv. Emissions of volatile organic compounds shall not exceed 0.01 lbs/hr.
   v. The above limits are based on a 30-day average.
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack B shall not equal or exceed 20 percent.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

11 (EP110) Extrusion Plant Vibrating Fluidized Bed Dryer (continued)

2. Emission Limitations: (continued)
Compliance Demonstration Method:

a. Mass Emission Limits:

i. For CO, NOx, and VOC:
Actual Emission Rate = [Monthly amount of natural gas combusted at the dryer] x [Emission factor observed during last state witnessed stack test (in pounds CO/NOx/VOC per million cubic feet of natural gas combusted at the dryer)] ÷ [Monthly hours of operation]

ii. For PM_{10}:
Actual Emission Rate = [Monthly extruded carbon produced] x [Emission factor observed during last sate witnessed stack test (in pounds PM_{10} per ton extruded carbon produced)] ÷ [Monthly hours of operation]

iii. Compliance with the low NOx burner limit (lb/mmBTU) shall be determined by stack testing upon startup of the extrusion plant. See General Condition **G**. (d) 5.

b. Opacity Limit:

i. During periods when (a) the rotoclone scrubber is operating properly **and** (b) natural gas is the only fuel burned at the dryer, no compliance demonstration is necessary.

ii. If the extrusion plant dryer is in operation during any period of malfunction of the rotoclone scrubber, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. See General Condition **G**. (d) 5.
c. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly amount of natural gas combusted at the extrusion dryer (in million cubic feet per month or equivalent).
b. Monthly amount of extruded carbon produced (in tons per month or equivalent).
c. Monthly hours of operation of the extrusion plant dryer.
d. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the liquid flow to the rotoclone scrubber.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

11 (EP110) Extrusion Plant Vibrating Fluidized Bed Dryer (continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly amount of natural gas combusted at the extrusion dryer (in million cubic feet per month or equivalent).
b. Monthly amount extruded carbon produced (in tons per month or equivalent).
c. Monthly hours of operation of the extrusion plant dryer.
d. Continuous records of the liquid flow to the rotoclone scrubber (on strip chart recorder, electronic data acquisition system or equivalent).
e. During all periods of malfunction of the rotoclone scrubber, if the extrusion plant dryer is in operation, a daily (calendar day) log of the following information shall be kept:
   i. Whether any air emissions were visible from Stack B;
   ii. Whether the visible emissions were normal for the stack.

   If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:
   iii. The permittee shall perform a Method 9 reading for Stack B. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
   iii. The permittee shall observe and record in the daily log the following additional information regarding Stack B:
      (1) The color of the emissions;
      (2) Whether the emissions were light or heavy;
      (3) The total duration of the visible emission incident;
      (4) The cause of the abnormal emissions; and
      (5) Any corrective actions taken.
f. All maintenance activities performed at the rotoclone scrubber.

6. Specific Reporting Requirements:

See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:

For the rotoclone scrubber:

a. The rotoclone scrubber shall be operated at a minimum liquid flow to be determined on startup (3-hour average).
b. An **excursion** from the operating range specified above is any 3-hour period during which the average liquid flow rate at the rotoclone scrubber was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

12 (EP120) Extrusion Plant Activation Kiln
(Vented through common Stack B)

Emission Sources:
Natural gas fired activation kiln (1.5 mmBTU/hr) - process and natural gas combustion emissions

Control Devices:
Activation kiln - rotoclone scrubber

Other Devices:
Activation kiln - Low NOx burner (NOx)

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the carbon monoxide, nitrogen oxides, volatile organic compounds (VOC), and PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations: None
Compliance Demonstration Method: N/A

2. Emission Limitations:

a. Mass Emission (BACT) Limits - Pursuant to Regulation 401 KAR 51:017, Section 9 (3):
   i. Emissions of carbon monoxide shall not exceed 0.04 lbs/hr.
   ii. Emissions of nitrogen oxides shall not exceed 0.1 lb/mmBTU and 0.20 lbs/hr.
   iii. Emissions of particulate matter (PM_{10}) shall not exceed 3.30 lbs/hr.
   iv. Emissions of volatile organic compounds shall not exceed 0.01 lbs/hr.
   v. The above limits are based on a 30-day average.
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack B shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission Limits:
   i. For CO, NOx, and VOC:
   Actual Emission Rate = [Monthly amount of natural gas combusted in the activation kiln] x [Emission factor observed during last state witnessed stack test (in pounds CO/NOx/VOC per thousand cubic feet of natural gas combusted in the activation kiln)] ÷ [Monthly hours of operation]
   ii. For PM_{10}:
   Actual Emission Rate = [Monthly extruded carbon production] x [Emission factor observed during last state witnessed stack test (in pounds PM_{10} per ton extruded carbon produced)] ÷ [Monthly hours of operation]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

12 (EP120) Extrusion Plant Activation Kiln (continued)

Compliance Demonstration Method:

a. iii. Compliance with the low NOx burner limit (lb/mmBTU) shall be determined by stack testing upon startup of the extrusion plant. See General Condition **G**. (d) 5.

b. Opacity Limit:
During periods when natural gas is the only fuel burned at the activation kiln, no compliance demonstration is necessary.

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. See General Condition **G**. (d) 5.
c. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly amount of natural gas combusted at the extrusion activation kiln (in million cubic feet per month or equivalent).
b. Monthly amount of extruded carbon produced (in tons per month or equivalent).
c. Monthly hours of operation of the extrusion plant activation kiln.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly amount of natural gas combusted at the extrusion activation kiln (in million cubic feet per month or equivalent).
b. Monthly amount of extruded carbon produced (in tons per month or equivalent).
c. Monthly hours of operation of the extrusion plant activation kiln.

6. Specific Reporting Requirements:

See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:

For the rotoclone scrubber:

a. The rotoclone scrubber shall be operated at a minimum liquid flow to be determined on startup (3-hour average).
b. An **excursion** from the operating range specified above is any 3-hour period during which the average flow to the rotoclone scrubber was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

15 (EP130) Extrusion Plant Activation Kiln Indirect Burners
(Vented through Zone 1-4 vents)

Emission Sources:
Natural gas fired activation kiln (19 indirect burners, 0.242 mmBTU/hr) - natural gas combustion emissions:

MP 01	Zone 1 vent - Six (6) indirect burners (0.242 mmBTU/hr each)
MP 02	Zone 2 vent - Five (5) indirect burners (0.242 mmBTU/hr each)
MP 03	Zone 3 vent - Five (5) indirect burners (0.242 mmBTU/hr each)
MP 04	Zone 4 vent - Three (3) indirect burners (0.242 mmBTU/hr each)

Control Devices:
None

Other Devices:
Activation kiln indirect burners - Low NOx burner (NOx)

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the carbon monoxide, nitrogen oxides, volatile organic compounds (VOC), and PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations: None
Compliance Demonstration Method: N/A

2. Emission Limitations:

a. Mass Emission (BACT) Limits - The following emission limits apply to *each individual* indirect burner. Pursuant to Regulation 401 KAR 51:017, Section 9 (3):
   i. Emissions of carbon monoxide shall not exceed 0.01 lbs/hr.
   ii. Emissions of nitrogen oxides shall not exceed 0.1 lb/mmBTU and 0.24 lbs/hr.
   iii. Emissions of particulate matter (PM_{10}) shall not exceed 0.003 lbs/hr.
   iv. Emissions of volatile organic compounds shall not exceed 0.003 lbs/hr.
   v. The above limits are based on a 30-day average.

b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from any single Zone Vent shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission (BACT) Limits - Each burner has a maximum rated capacity of 0.242 mmBTU/hr and is deemed to be in compliance with all mass emission standards while burning natural gas only.
b. Opacity Limit - Each burner is deemed to be in compliance with the opacity limit while burning natural gas only.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

15 (EP130) Extrusion Plant Activation Kiln Indirect Burners

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
The permittee shall maintain records of the vendor rated capacity of each burner

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

13 (EP130) Extrusion Plant Finishing System
(Vented through common stack B)

Emission Sources:
Extrusion finishing process operations

Control Devices:
Extrusion finishing process operations - Cartridge filter (PM_{10})

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations:

The cartridge filter shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions sources [extrusion finishing process operations] listed above are in operation. The extrusion finishing process operations are considered in operation any time carbon is being conveyed to or from the extrusion finishing process operations.

Compliance Demonstration Method:

The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the emission sources listed above are in operation but the associated cartridge filter is not.

2. Emission Limitations:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3), emissions of particulate matter (PM_{10}) shall not exceed 0.38 lbs/hr (30-day average).
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack C shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission Limit:
Actual Emission Rate = [Monthly extruded carbon production] x [Emission factor observed during last state witnessed stack test (in pounds PM_{10} per ton of extruded carbon shipped)] ÷ [Monthly hours of operation]

b. Opacity Limit:
   i. During periods of normal operation of the cartridge filter, no compliance demonstration is necessary.
   ii. If the extrusion finishing processes are in operation during any period of malfunction of the cartridge filter, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

13 (EP130) Extrusion Plant Finishing System (Continued)

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. See General Condition **G**. (d) 5.
c. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly amount of extruded carbon production (in tons/month or equivalent).
b. Monthly hours of operation.
c. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the differential static pressure across the cartridge filter.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly amount of extruded carbon production (in tons/month or equivalent).
b. Monthly hours of operation.
c. Continuous records of the differential static pressure across the cartridge filter (on strip chart recorder, electronic data acquisition system or equivalent).
d. During all periods of malfunction of the cartridge filter, if the extrusion finishing processes are in operation, a daily (calendar day) log of the following information shall be kept:
    i. Whether any air emissions were visible from Stack B;
    ii. Whether the visible emissions were normal for the stack.

    If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:
    iii. The permittee shall perform a Method 9 reading for Stack B. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
    iii. The permittee shall observe and record in the daily log the following additional information regarding Stack B:
        (1) The color of the emissions;
        (2) Whether the emissions were light or heavy;
        (3) The total duration of the visible emission incident;
        (4) The cause of the abnormal emissions; and
        (5) Any corrective actions taken.
f. All maintenance activities performed at the cartridge filter.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

13 (EP130) Extrusion Plant Finishing System (Continued)

6. Specific Reporting Requirements:
See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:
For the cartridge filter:

a. The cartridge filter shall be operated at a minimum differential pressure drop to be determined on startup (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the cartridge filter was below the minimum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

14 (EP140) Hydrochloric Acid Delivery and Storage
(Vented through stack D)

Emission Sources:
Two (2) HCl Storage Tanks - The 25% hydrochloric acid storage tank is 12,900 gallons and the hydrochloric acid tank scrubber tank is 4,230 gallons.

Control Devices:
HCl Storage Tanks - Packed bed scrubber (HCl)

APPLICABLE REGULATIONS: None

1. **Operating Limitations:**
The packed bed scrubber shall control HCl emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the storage tanks are being filled.

Compliance Demonstration Method:
The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the storage tanks are being filled but the packed bed scrubber is not operational.

2. **Emission Limitations:** None
Compliance Demonstration Method: N/A

3. **Testing Requirements:**
Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**
The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the liquid flow to the packed bed scrubber whenever the storage tanks are being filled.

5. **Specific Recordkeeping Requirements:**
The permittee shall maintain records of the following information:
   a. Continuous records of the liquid flow to the packed bed scrubber (on strip chart recorder, electronic data acquisition system or equivalent).
   b. For each incident when the storage tanks are being filled during any period of malfunction of the packed bed scrubber, the permittee shall estimate emissions from EP140 for the entire duration of the incident. The permittee shall maintain records of the emissions calculations and the total duration of the incident.
   c. All maintenance activities performed at the packed bed scrubber.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

14 (EP140) Hydrochloric Acid Delivery and Storage (Continued)

6. Specific Reporting Requirements:
See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

16 (EP150) Lime Storage and Feed System
(Vented through common Stack B)

Emission Sources:
Lime storage and feed system process operations

Control Devices:
Lime storage and feed system process operations - Cartridge filter (PM_{10})

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 51:017 applies to the PM_{10} emissions.
b. Regulation 401 KAR 59:010 applies to the visible emissions.

1. Operating Limitations:

The cartridge filter shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions sources [lime storage and feed system processes] listed above are in operation. The lime storage and feed system is considered in operation any time lime is being conveyed into the lime storage tank.

Compliance Demonstration Method:

The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the emission sources listed above are in operation but the associated cartridge filter is not.

2. Emission Limitations:

a. Mass Emission (BACT) Limit - Pursuant to Regulation 401 KAR 51:017, Section 9 (3), emissions of particulate matter (PM_{10}) shall not exceed 0.30 lbs/hr (30-day average).
b. Opacity Limit - Pursuant to Regulation 401 KAR 59:010, Section 3 (1), the opacity of visible emissions from Stack B shall not equal or exceed 20 percent.

Compliance Demonstration Method:

a. Mass Emission Limit:
   Actual Emission Rate = [Monthly dry sawdust to activation kiln] x [Emission factor observed during last state witnessed stack test (in pounds PM_{10}/per ton dry sawdust)] ÷ [Monthly hours of operation of drying kiln]
b. Opacity Limit:
   i. During periods of normal operation of the cartridge filter, no compliance demonstration is necessary.
   ii. If the lime storage and feed system processes are in operation during any period of malfunction of the cartridge filter, the permittee shall determine compliance through maintenance of the records required by Item d. under **5. Specific Recordkeeping Requirements below**.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

16 (EP150) Lime Storage and Feed System (Continued)

3. Testing Requirements:

a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

b. See General Condition **D**.1.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

a. Monthly amount of lime received (in tons/month or equivalent).

b. Monthly hours of operation.

c. The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement of the differential static pressure across the cartridge filter.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly amount of lime received (in tons/month or equivalent).

b. Monthly hours of operation.

c. Continuous records of the differential static pressure across the cartridge filter (on strip chart recorder, electronic data acquisition system or equivalent).

d. During all periods of malfunction of the cartridge filter, if the lime storage and feed system processes are in operation, a daily (calendar day) log of the following information shall be kept:

i. Whether any air emissions were visible from Stack B;

ii. Whether the visible emissions were normal for the stack.

If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform **one** of the following:

iii. The permittee shall perform a Method 9 reading for Stack B. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or

iii. The permittee shall observe and record in the daily log the following additional information regarding Stack B:

(1) The color of the emissions;

(2) Whether the emissions were light or heavy;

(3) The total duration of the visible emission incident;

(4) The cause of the abnormal emissions; and

(5) Any corrective actions taken.

e. All maintenance activities performed at the cartridge filter.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

16 (EP150) Lime Storage and Feed System (Continued)

6. Specific Reporting Requirements:
See General Condition **F**.5.

7. Specific Control Equipment Operating Conditions:
For the cartridge filter:

a. The cartridge filter shall be operated at a minimum differential pressure drop of 1 inch of water (3-hour average).

b. An **excursion** from the operating range specified above is any 3-hour period during which the average pressure drop across the cartridge filter was below the minimum specified.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to Regulation 401 KAR 50:035, Section 5(4). While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

	Description	Generally Applicable Regulation
1.	One (1) 0.5 mmBTU/hr natural gas fired heater located at the natural gas pressure reducing station.	None
2.	Odorant flare	None
3.	Three (3) 1,500 gallon polymer storage tanks	None
4.	One (1) 285 gallon diesel storage tank	None
5.	One (1) 550 gallon diesel storage tank	None
6.	Five (5) laboratory fume hoods located in plant Quality Control Laboratory. All fume hoods routed to common vent.	None
7.	One (1) 182 hp emergency diesel powered firewater pump operated less than 500 hours/year	None
8.	Twelve (12) 60,000 BTU/hour each natural gas fired heaters. Six (6) located in Waste Water Treatment Area and six (6) located in Product Warehouse.	None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. a. In the 18-month period immediately preceding the date of expiration of this permit, the permittee shall conduct performance testing on all stacks listed herein. The performance tests shall include:
   i. Stack A: Emission source EP020 (For particulate matter, nitrogen oxides, carbon monoxide, volatile organic compounds, furfural, phosphoric acid emissions and NOx burner factor.)
   ii. Stack A: Emission sources EP070 and EP080 (For particulate matter, nitrogen oxides, carbon monoxide, volatile organic compounds, and phosphoric acid).
   iii. Stack B: Emission source EP030 (For particulate matter, nitrogen oxides, carbon monoxide, and volatile organic compounds emissions.)
   iv. Stack C: Emission source EP040 (For particulate matter emissions)

   The performance tests shall be scheduled in a manner that will allow sufficient time:
   i. To conduct the performance tests;
   ii. To submit the test reports;
   iii. For verification of the test results by the division;
   iv. For use of the verified results as a basis for renewal of this permit.

   b. Source EP020 includes two natural gas burners. One supplying energy to the Activation Kiln and the second supplying auxiliary energy to the Afterburner. The Activation Kiln burner is rated at 70 mm BTU/hour and the Afterburner burner is rated at 130 mm BTU/hour. The NOx burner limits are:

   Activation Kiln: 0.130 lb/mm BTU
   Afterburner: 0.30 lb/mm BTU

   Compliance with the NO_x burner limits will be done in aggregate by comparing the calculated NOx burner factor against the effective NOx limit. The calculated NOx burner factor is as follows:

   i. Calculated Factor = $\frac{NO_x \text{ emissions (lb/hr) during compliance test}}{N_T}$

   Where: $N_T = N_{AK} + N_{AB}$
   N_{AK} = Average natural gas to Activating Kiln during compliance test, mmBTU/hour
   N_{AB} = Average natural gas to Afterburner during compliance test, mmBTU/hour

   ii. Effective Limit = $0.13(N_{AK}/N_T) + 0.30(N_{AB}/N_T)$

   The plant is considered in compliance with the burner limits if the "Calculated Factor" is less than or equal to the "Effective Limit".

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. When continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements.
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement;

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 50:035, Permits, Section 7(1)(d)2 and 401 KAR 50:035, Permits, Section 7(2)(c)]

3. In accordance with the requirements of Regulation 401 KAR 50:035, Permits, Section 7(2)(c) the permittee shall allow the Cabinet or authorized representatives to perform the following:
   a. Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are kept;
   b. Have access to and copy, at reasonable times, any records required by the permit:
      i. During normal office hours, and
      ii. During periods of emergency when prompt access to records is essential to proper assessment by the Cabinet;
      iii. The Cabinet or authorized representatives will allow the facility reasonable time to collect and/or download the required records.
   c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency; and
   d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

5. Reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be reported to the division's Paducah Regional Office no later than the six-month anniversary date of this permit and every six months thereafter during the life of this permit, unless otherwise stated in this permit. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of Regulation 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to Section 6(1) of Regulation 401 KAR 50:035, Permits. All deviations (i.e., excursions[(1)], exceedences[(2)], and deviations from specific Operating Limitations) from permit requirements shall be clearly identified in the reports.

   The reports shall contain a summary of the following information:

   a. For each emission point for which specific monitoring (periodic or continuous) is required by this permit, whether the required monitoring was performed for the entire 6-month period covered by the report (Yes/No).
      For any periods during which the required monitoring was not performed, the report shall contain the following additional information:
      i. Duration of each incident.
      ii. The cause of the incident and any corrective action(s) taken.
   b. For each control device, whether any excursions (as defined in this permit) were recorded during the 6-month period covered by the report (Yes/No).
      If any excursions were recorded, the report shall contain the following information:
      i. Duration of the incident.
      ii. The cause of the incident and any corrective action(s) taken.
      iii. Whether the excursion resulted in the exceedence of an emissions standard.
   c. For each emission point and for each pollutant with a specific allowable emission limit, whether there were any exceedence(s) of an allowable emission limit (Yes/No).
      For each recorded exceedence, the report shall contain the following additional information:
      i. Duration of the incident.
      ii. The cause of the incident and any corrective action(s) taken.
   d. For each emission point with a specific operating limitation, whether there were any periods of deviation from the specified operating limitation (Yes/No).
      For each deviation, the report shall contain the following additional information:
      i. Duration of the deviation.
      ii. The cause of the deviation and any corrective action(s) taken.

   [(1)]An "excursion" is defined as any period (taking into account the appropriate averaging time) during which a control device operates outside the range specified by this permit.
   [(2)]An "exceedence" is defined as any period (taking into account the appropriate averaging time) during which the actual emission rate from any emission point exceeds the allowable emission limit specified in this permit for that emission point.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. a. In accordance with the provisions of Regulation 401 KAR 50:055, Section 1 the owner or operator shall notify the Division for Air Quality's Paducah Regional Office concerning startups, shutdowns, or malfunctions as follows:
   i. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.

   b. In accordance with the provisions of Regulation 401 KAR 50:035, Section 7(1)(e)2, the owner or operator shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by general condition 6 a. above) to the Division for Air Quality's Paducah Regional Office. Prompt reporting shall be defined as follows:

   For **excursions**:
   i. For short-term (less than or equal to 24-hours in duration) excursions from, or failure to record the parameters used to monitor the performance of control devices (afterburners, scrubbers, baghouses, etc), the permittee shall include a summary of the excursions in the bi-annual reporting required by Condition **F.**5. above.
   ii. For longer periods of excursion (greater than 24 hours in duration) or inability to record monitoring parameters, the permittee shall contact the Paducah Regional office within 72 hours (excluding weekends and holidays).

   For **exceedences**:
   i. For short-term exceedences (less than or equal to 24-hours in duration), the permittee shall include a summary of the excursions in the bi-annual reporting required by Condition **F.**5. above.
   ii. For longer periods of exceedences (greater than 24-hours in duration), the permittee shall contact the Paducah Regional office within 72 hours (excluding weekends and holidays).

   For **other requirements**:
   In the event that the permittee is unable to fulfill a requirement (such as a performance test, compliance certification submittal) within the timeframe specified herein, the permittee shall contact the Paducah Regional Office and the Frankfort Central office within 72 hours of expiration of the relevant timeframe. Extensions of the timeframes specified herein may be granted by the Division upon a satisfactory request showing that an extension is justified.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

7. Compliance Certification Requirement - Pursuant to Regulation 401 KAR 50:035, Permits, Section 7(2)(b), the permittee shall certify compliance with the terms and conditions contained in this permit, annually on the permit issuance anniversary date by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Division for Air Quality's Paducah Regional Office and the U.S. EPA in accordance with the following requirements:
   a. Identification of each term or condition of the permit that is the basis of the certification;
   b. The compliance status regarding each term or condition of the permit;
   c. Whether compliance was continuous or intermittent; and
   d. The method used for determining the compliance status for the source, currently and over the reporting period, pursuant to 401 KAR 50:035, Section 7(1)(c),(d), and (e).
   e. The certification shall be postmarked by the thirtieth (30) day following the applicable permit issuance anniversary date. Annual compliance certifications should be mailed to the following addresses:
      i. Division for Air Quality
      Paducah Regional Office
      4500 Clarks River Road
      Paducah, KY 42003

      ii. U.S. EPA Region IV
      Air Enforcement Branch
      Atlanta Federal Center
      61 Forsyth Street
      Atlanta, GA 30303-8960

      iii. Division for Air Quality
      Central Files
      803 Schenkel Lane
      Frankfort, KY 40601

8. In accordance with Regulation 401 KAR 50:035, Section 23, the permittee shall provide the division with all information necessary to determine its subject emissions within thirty (30) days of the date the KEIS emission report is mailed to the permittee.

9. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the division by the source or its representative within forty-five days after the completion of the fieldwork.

10. For the purposes of this permit, in accordance with the provisions of Regulation 40 CFR 63 Subpart A, a continuous recording device is defined as one that capable of recording a minimum of one data sample every 15 minutes. Data from continuous recording devices unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities are being performed.

SECTION G - GENERAL CONDITIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. A noncompliance shall be (a) violation(s) of state regulation 401 KAR 50:035, Permits, Section 7(3)(d) and for federally enforceable permits is also a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to Regulation 401 KAR 50:035, Section 12(2)(c);
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish to the division, in writing, information that the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. [401 KAR 50:035, Permits, Section 7(2)(b)3e and 401 KAR 50:035, Permits, Section 7(3)(j)]

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority.

SECTION G - GENERAL CONDITIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [401 KAR 50:035, Permits, Section 7(3)(k)]

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [401 KAR 50:035, Permits, Section 7(3)(e)]

8. Except as identified as state-origin requirements in this permit, all terms and conditions contained herein shall be enforceable by the United States Environmental Protection Agency and citizens of the United States.

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6). [401 KAR 50:035, Permits, Section 7(3)(h)]

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 50:035, Permits, Section 8(3)(b)]

11. This permit shall not convey property rights or exclusive privileges. [401 KAR 50:035, Permits, Section 7 (3)(g)]

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry. [401 KAR 50:035 , Permits, Section 7(2)(b)5]

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders. [401 KAR 50:035, Permits, Section 8(3)(a)]

15. Permit Shield: Except as provided in State Regulation 401 KAR 50:035, Permits, compliance by the affected facilities listed herein with the conditions of this permit shall be deemed to be compliance with all applicable requirements identified in this permit as of the date of issuance of this permit.

16. All previously issued construction and operating permits are hereby null and void.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(b) Permit Expiration and Reapplication Requirements

This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the division. [401 KAR 50:035, Permits, Section 12]

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of Regulation 401 KAR 50:035, Section 15.

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority thirty (30) days in advance of the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements
[**NOTE** - These requirements only apply to the Extrusion Plant emission points (10, 11, 12, 13, and 15)]

1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

2. Within thirty (30) days following commencement of construction, and within fifteen (15) days following start-up, and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Division for Air Quality's Paducah Regional Office in writing, with a copy to the division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

SECTION G - GENERAL CONDITIONS (CONTINUED)

3. Pursuant to State Regulation 401 KAR 50:035, Permits, Section 13(1), unless construction of Phase III (Extrusion Plant) is commenced on or before 18 months after the proposed commencement date of Phase III, or if construction of Phase III is commenced and then stopped for any consecutive period of 18 months or more, or if construction of Phase III is not completed within eighteen (18) months of the scheduled completion date, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Extensions of the time periods specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.

Phase III	Proposed Commencement Date
(Emission Points 10, 11, 12, 13, and 15)	June 31, 1999

4. Operation of the affected facilities in Phase III for which construction is authorized by this permit shall not commence until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055, except as provided in Section I of this permit.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities in Phase III listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance test on the affected facilities in accordance with Regulation 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Conditions G(d)6 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

6. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the division shall be notified of the actual test date at least ten (10) days prior to the test.

7. The periodic monitoring parameters for the sources in the Extrusion Plant will be determined during startup. The defined parameter thresholds will be added to the permit through minor permit revision procedures.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(f) Emergency Provisions

1. An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
   d. The permittee notified the division as promptly as possible and submitted written notice of the emergency to the division within two working days after the time when emission limitations were exceeded due to the emergency. The notice shall meet the requirements of 401 KAR 50:035, Permits, Section 7(1)(e)2, and include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken. This requirement does not relieve the source of any other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement.

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 50:035, Permits, Section 9(3)]

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall:
   a. Submit a Risk Management Plan to U.S. EPA, Region IV with a copy to this division and comply with the Risk Management Program by June 21, 1999 or a later date specified by the U.S. EPA.
   b. Submit additional relevant information if requested by the division or the U.S. EPA.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not Applicable

SECTION I - COMPLIANCE SCHEDULE

1. To implement any new monitoring, recordkeeping, and reporting requirements included herein for emission points already in operation, the division hereby authorizes a ninety (90) day compliance extension, beginning with the issuance of this permit.
2. For the Extrusion Plant emission points (10, 11, 12, 13, 15), the permittee shall implement all monitoring, reporting, and recordkeeping requirements included herein within 30 days of initial startup of the plant.